

CLAIMS

1. A screw for plastication of resin material installed in a plasticizing cylinder for plasticizing a resin material for molding, wherein

an external diameter D of a metering section formed at a top part of the screw is 100 mm or less,

an L/D ratio obtained by dividing a length L of a section of the screw on an outer surface of which a spiral screw flight is formed by the external diameter D of the metering section is 10 or less, and

a pitch of the screw flight is designed so that a thread length thereof falls within a range of 30 to 300% of a thread length of a screw in which an L/D ratio is 20 to 24 and a pitch of a screw flight is designed to be the same as an external diameter D of a metering section.

2. The screw for plastication of resin material according to claim 1, wherein

an external diameter of a feed section for feeding the resin material into the plasticizing cylinder is designed to be larger than the external diameter of the metering section for keeping an extrusion amount of the resin material uniform and an external diameter of a compression section for plasticizing the resin material, and

a channel depth of the feed section formed by the screw flight is designed to be larger than a channel depth of the compression section.

3. The screw for plastication of resin material according to claim 1 or 2, wherein

a pitch of the screw flight in the feed section for feeding the resin material into the plasticizing cylinder is designed to be larger than a pitch of the screw flight in the metering section for keeping the extrusion amount of the resin material uniform and smaller than the external diameter of the metering section, and

a pitch of the screw flight in the compression section for plasticizing the resin material is designed to become smaller gradually from the feed section toward the metering section.

4. The screw for plastication of resin material according to claim 3, wherein

the pitch of the screw flight in the feed section for feeding the resin material into the plasticizing cylinder is designed to be more than 1.5 times as large as the pitch of the screw flight in the metering section for keeping the extrusion amount of the resin material uniform.

5. A plasticizing mechanism for resin material, wherein

the screw for plastication of resin material according to any of claims 1 to 4 is installed in the plasticizing cylinder for plasticizing the resin material, and

a torpedo plate, in which a torpedo is supported so

as to be positioned in a central part of a path of the resin material, is arranged to be mountable and demountable at a downstream part of a flow of the resin material in the plasticizing screw, and the resin material inside the plasticizing cylinder is conveyed to flow around the torpedo in the torpedo plate.